

## **Remarks/Arguments**

Applicant appreciates the feedback received from Examiner Motsinger in the Office Action document. The claims are amended to respond to the Office communication.

### **Claim Rejections – 35 USC §112**

Claims 4, 5, 6, 16, 17, and 18 are amended to replace “PatternMap” by “pattern map”.

Claim 2 is amended to specify “performing automation control of the relational feature development step and the relational feature analysis step using a recipe.”

Claim 16 is amended to depend from claim 6 with antecedent basis for the “pattern map integration and update step”.

Applicants respectfully submit that the amended claims overcomes Examiner Motsinger’s 35 USC §112 rejections.

### **Claim Rejections – 35 USC §103**

Applicant appreciates Examiner Motsinger’s helpful feedback.

Garcia discloses a multiresolution curvature based method to segment, characterize and pair a set of chromosome in cell of an eukaryotic organism. This is the front end processing that will provide the input image containing object labels to our claim 1 step a). Cabib discloses a method and hardware using a set of N decorrelation matched filters for chromosome classification by decorrelation statistical analysis to provide color (spectral) karyotypes and to detect chromosomal aberrations. This is also the front end processing that will provide the input image containing object labels to our claim 1 step a).

The current invention is focusing on post-processing to create pattern map and determine and analyze the relational features from pattern map. Therefore, the current invention is patently distinctive from Garcia and Cabib.

We amended claims to add limitations reflecting the distinctive arts of the current invention that overcomes Garcia and Cabib. The applicant respectfully responds as follows:

#### **Claim 1**

Garcia Figure 10d shows extracted karytype which is not pattern map. Cabib column 38 lines 45-55 do not analyze pattern map. We added limitations to clarify the pattern map in step b) as follows:

“wherein the pattern map consists of  $C \times C$  object class relationships across an image set, each row of the pattern map is a distribution of object classes relations to  $C$  other classes including itself”.

Applicants respectfully submit that the amended claim 1 clearly specifies the essence of the invention that is unanticipated by Garcia and Cabib.

Since Claim 1 is the independent claim for the other dependent claims. The amended claim 1 should also overcome Motsinger's USC §103 rejection for the dependent claims 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 17 and 18.

Applicant respectfully submits that the amended claim 1 overcomes Examiner Motsinger's 35 USC §103 rejection.

### **Allowable Subject Matter**

Applicants respectfully submit that the amended allowable claims 13-15 overcomes Examiner Motsinger's 35 USC §112 rejections.

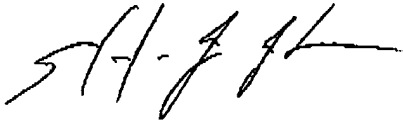
### **Conclusion**

In view of the above remarks and arguments, applicant submits that the amendments to the specification and claims overcome claim rejections under 35 USC §101, 35 USC §112 and 35 USC §103 and the objection to the allowable claims are cured. Therefore applicant submits that this application is in condition for allowance, which action applicant respectfully solicits.

### **Conditional Request for Constructive Assistance**

If for any reason this application is not believed to be in full condition for allowance, Applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to MPEP para. 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



Shih-Jong J. Lee



Samuel Alworth